

**Listing of Claims**

1- 11 (canceled)

12.(New) In a resource management infrastructure including a framework for allowing management applications to access managed objects, the framework supporting compliant providers of dynamic services for the managed objects running in a first operative environment, a method of integrating a plurality of non-compliant providers of dynamic services for a set of the managed objects, the non-compliant providers running in a second operative environment that is not supported by the framework, wherein the method includes the steps of:

the framework requesting a first dynamic service for a selected managed object of the set from a compliant provider associated with the selected managed object, the compliant provider being common to all the managed objects of the set;

the compliant provider converting at least one first parameter received from the framework with the request of the first service into at least one second parameter supported by the second operative environment;

the compliant provider identifying a non-compliant provider associated with the selected managed object;

the compliant provider verifying whether the second operative environment has been created before requesting the second dynamic service to the intermediate entity;

the compliant provider creating the second operative environment if the result of the verification is negative;

the compliant provider requesting a second dynamic service for the selected managed object, corresponding to the first dynamic service, to an intermediate entity running in the second operative environment and passing an indication of the non-compliant provider;

the compliant provider passing the at least one second parameter to the intermediate entity with the request of the second dynamic service;

the intermediate entity routing the request of the second dynamic service to the non-compliant provider, the intermediate entity passing the at least one second parameter to the non-compliant provider with the request of the second dynamic service;

the non-compliant provider returning a result of the second dynamic service to the intermediate entity;  
the intermediate entity returning the result of the second dynamic service to the compliant provider;  
the compliant provider constructing a result of the first dynamic service according to the result of the second dynamic service;  
the compliant provider returning the result of the first dynamic service to the framework;  
and  
the compliant provider destroying the second operative environment after a predetermined time-out from a last use thereof.

13.(new) The method according to claim 12, further including the steps under the control of the intermediate entity of:

verifying whether each non-compliant provider has been created before requesting the second dynamic service to the non-compliant provider,  
creating the non-compliant provider if the result of the verification is negative, and  
destroying the non-compliant provider after a predetermined further time-out from a last use thereof.

14.(new) The method according to claim 13, further including, under the control of the intermediate entity:

when requesting the second dynamic service to each non-compliant provider, removing a possible record including an identifier of the non-compliant provider from a FIFO queue and inserting a new record into the FIFO queue including the identifier of the non-compliant provider together with an expiration time thereof calculated to add further time-out to a current time,  
setting a signalling time of a timer to the expiration time of a first record to be extracted from the FIFO queue,  
in response to the timer reaching the signalling time, destroying the non-compliant provider identified in the first record of the FIFO queue,  
extracting the first record from the FIFO queue, and

setting the signalling time of the timer to the expiration time of the new first record to be extracted from the FIFO queue.

15.(new) A computer program product for implementing a resource management infrastructure including a framework for allowing management applications to access a set of managed objects, the framework supporting compliant providers of dynamic services for the managed objects running in a first operative environment and for integrating a plurality of non-compliant providers of dynamic services for said-set of the managed objects, the non-compliant providers running in a second operative environment that is not supported by the framework, the computer program product comprising a computer usable medium having computer usable program code embodied therewith, the computer usable program code comprising:

- computer usable program code configured to request a first dynamic service for a selected managed object of the set from a compliant provider associated with the selected managed object, the compliant provider being common to all the managed objects of the set;

- computer usable program code configured to cause the compliant provider to convert at least one first parameter received from the framework with the request of the first service into at least one second parameter supported by the second operative environment;

- computer usable program code configured to cause the compliant provider to identify a non-compliant provider associated with the selected managed object;

- computer usable program code configured to cause the compliant provider to verify whether the second operative environment has been created before requesting the second dynamic service to the intermediate entity;

- computer usable program code configured to cause the compliant provider to create the second operative environment if the result of the verification is negative;

- computer usable program code configured to cause the compliant provider to send a request a second dynamic service for the selected managed object, corresponding to the first dynamic service, to an intermediate entity running in the second operative environment, said request comprising an indication of the non-compliant provider;

- computer usable program code configured to cause the compliant provider to pass the at least one second parameter to the intermediate entity with the request of the second dynamic service;

computer usable program code configured to cause the intermediate entity to route the request for the second dynamic service to the non-compliant provider, the intermediate entity passing the at least one second parameter to the non-compliant provider with the request of the second dynamic service;

computer usable program code configured to cause the non-compliant provider to return a result of the second dynamic service to the intermediate entity;

computer usable program code configured to cause the intermediate entity to return the result of the second dynamic service to the compliant provider;

computer usable program code configured to cause the compliant provider to construct a result of the first dynamic service according to the result of the second dynamic service;

computer usable program code configured to cause the compliant provider to return the result of the first dynamic service to the framework; and

computer usable program code configured to cause the compliant provider to destroy the second operative environment after a predetermined time-out from a last use thereof.

16.(new) A computer program product according to claim 15, further comprising:

computer usable program code configured to cause the intermediate entity to verify whether each non-compliant provider has been created before requesting the second dynamic service to the non-compliant provider,

computer usable program code configured to cause the intermediate entity to create the non-compliant provider if the result of the verification is negative, and

computer usable program code configured to cause the intermediate entity to destroy the non-compliant provider after a predetermined further time-out from a last use thereof.

17.(new) A computer program product according to claim 16, further comprising:

computer usable program code configured to cause the intermediate entity to, when requesting the second dynamic service to each non-compliant provider, remove a possible record including an identifier of the non-compliant provider from a FIFO queue and insert a new record into the FIFO queue including the identifier of the non-compliant provider together with an expiration time thereof calculated to add further time to a current time,

computer usable program code configured to cause the intermediate entity to set a signalling time of a timer to the expiration time of a first record to be extracted from the FIFO queue,

computer usable program code configured to cause the intermediate entity to, in response to the timer reaching the signalling time, destroying the non-compliant provider identified in the first record of the FIFO queue,

computer usable program code configured to cause the intermediate entity to extract the first record from the FIFO queue, and

computer usable program code configured to cause the intermediate entity to set the signalling time of the timer to the expiration time of the new first record to be extracted from the FIFO queue.

18.(new) A resource management infrastructure comprising:

a framework for enabling management applications to access managed objects,

a compliant provider of dynamic services for the managed objects running in a first operative environment, said compliant provider being common to all the managed objects in the set;

a non-compliant provider of dynamic services for the managed objects, said at least one non-compliant provider running in a second operative environment that is not supported by the framework; and

an intermediate entity running in the second operative environment,

said compliant provider further comprising,

means for receiving a request from said framework for a first dynamic service for a selected managed object,

means for converting at least one parameter received from the framework with the request of the first service into at least one second parameter supported by the second operative environment,

means for identifying a non-compliant provider associated with the selected management object,

means for verifying whether the second operative environment has been created before requesting the second dynamic service to the intermediate entity,

means for creating the second operative environment if the result of the verification is negative,  
means for sending a request to the intermediate entity for a second dynamic service for the selected management object, the request comprising an identification of a non-compliant provider,  
said intermediate entity further comprising means for routing the request for the second dynamic service to the identified non-compliant provider, the routed request comprising the at least one second parameter,  
said non-compliant provider further comprising means for returning a result of the second dynamic service to the intermediate entity,  
said intermediate entity further comprising means for forwarding the returned result to the compliant provider,  
the compliant provider further comprising means for constructing a result of the first dynamic service according to the result of the second dynamic service , means for returning the result of the first dynamic service to the framework, and means for destroying the second operative environment after a predetermined time-out from a last use thereof.

19. (new) A resource management infrastructure according to claim 18 wherein said intermediate entity further comprises:

means for verifying whether each non-compliant provider has been created before requesting the second dynamic service to the non-compliant provider;  
means for creating the non-compliant provider if the result of the verification is negative;  
and  
means for destroying the non-compliant provider after a predetermined further time-out from a last use thereof.

20.(new) A resource management infrastructure according to claim 19 wherein intermediate entity further comprises:

means for, when requesting the second dynamic service from each non-compliant provider, removing a possible record including an identifier of the non-compliant provider from

a FIFO queue and inserting a new record into the FIFO queue including the identifier of the non-compliant provider together with an expiration time thereof calculated to add further time to a current time;

means for setting a signalling time of a timer to the expiration time of a first record to be extracted from the FIFO queue;

means, responsive to the timer reaching the signaling time, destroying the non-compliant provider identified in the first record of the FIFO queue;

means for extracting the first record from the FIFO queue; and

means for setting the signalling time to the expiration time of the new first record to be extracted from the FIFO queue.